

REMARKS

The Official Action dated December 11, 2007 has been received and its contents carefully noted. In view thereof, claims 1 and 10 have been amended. Accordingly, claims 1-15 are presently pending in the application, of which, claims 6-9 are withdrawn from consideration. Reconsideration and withdrawal of the currently pending rejections are requested for the reasons advanced in detail below.

The Examiner's indication of allowable subject matter with respect to claims 4, 5, 14 and 15 is gratefully acknowledged. However, for the reasons advanced herein, it is respectfully submitted that all of the pending claims 1-15 are allowable.

Claims 1-3 and 10-13 were rejected under 35 U.S.C. §102(b) as being anticipated by Solomon et al. (U.S. Patent No. 6,446,248). Solomon et al., however, fails to render the claimed invention unpatentable. Each of the claims recite a specific combination of features that distinguishes the invention from the prior art in different ways. For example, independent claims 1 recites a combination that includes, among other things:

“designing a logic function of the integrated circuit . . . designing a pattern layout of the integrated circuit so that the pattern layout includes a logic cell area and an open area . . . providing a spare underground cell having no interconnect patterns and contacts . . . inserting said spare underground cell into the open area, wherein the spare underground cell includes a functional element . . . designing a mask layout of the integrated circuit, the mask layout including the logic cell and the spare underground cell.”

Independent claim 10 recites yet another combination that includes, inter alia,

“designing a logic function of the integrated circuit . . . designing a pattern layout of the integrated circuit so as to include a plurality of logic cells in a logic cell area and an open area . . . providing a plurality of spare underground cells having no interconnect patterns and contacts . . . inserting said plurality of spare underground cells into the open area, wherein each of the spare underground cells includes a plurality of functional elements . . . designing a mask layout of the integrated circuit, the mask layout including the logic cells and the spare underground cells.”

At the very least, Solomon et al. fails to disclose or suggest any of these exemplary features recited in the independent claims 1 and 10.

To establish anticipation under 35 U.S.C. § 102(b), the Examiner must show that each and every feature recited in these claims is either explicitly disclosed or “necessarily present” in a single prior art reference, such as within the four corners of the Solomon et al. patent. *See* M.P.E.P. § 2131(7th ed. 1998); *In re Robertson*, 169 F.3d 743, 745 (Fed. Cir. 1999); *Continental Can Co. v. Monsanto Co.*, 948 F.2d 1264, 1269 (Fed. Cir. 1991). To support a conclusion of anticipation, the Examiner must specifically identify “substantial evidence” setting forth why and how the single prior art reference anticipates each and every feature recited in the claims. *See In re Mullin*, 481 F.2d 1333, 1336-37 (CCPA 1973) (An Examiner’s bare assertion that claims were obviously anticipated by a reference did not inform the Applicant as to why the claims lacked novelty); *Dickinson v. Zurko*, 527, U.S. 150 (1999) (The U.S. Patent Office’s findings of fact must be reviewed by the substantial evidence standard).

Viewed against this backdrop, each of the Examiner’s factual conclusions must be supported by “substantial evidence” in the documentary record. *See In re Lee*, 61 U.S.P.Q.2d 1430, 1432 (Fed. Cir. 2002). The Examiner has the burden of documenting all findings of fact necessary to support a conclusion of anticipation or obviousness “less to ‘haze of so-called expertise’ acquire insulation from accountability.” *Id.* To satisfy this burden, the Examiner must specifically identify where support is found within the prior art to meet the requirements of 35 U.S.C. §§ 102(b). In this case, however, the Examiner cannot satisfy his burden of demonstrating how Solomon et al., taken alone or in combination with any other prior art reference, can either render obvious each and every one of the limitations present in

independent claims 1 and 10 as required by the Manual of Patent Examining Procedure (“MPEP”) and Federal Circuit jurisprudence.

The claimed invention recites, *inter alia*, a spare underground cell having no interconnect patterns and contacts. The aforementioned features facilitate the realization of advantages provided by the claimed invention over the prior art as further described in Applicants’ originally filed specification. Turning to the outstanding Office Action, Solomon et al. fails to disclose that the base cell 245 has no interconnect patterns and contacts as claimed. In fact, Solomon et al. teaches away from the claimed invention. The Examiner relies on FIG. 3A to purport that Solomon et al. discloses no interconnect patterns and contacts. However, upon further review of FIG. 3A, it is clear that the base cell 245 shown therein is meant to including additional components evidence more by the symbols, for example, “Mp2 . . .” The disclosure of Solomon et al. including the description of FIG 3A and at col. 5, lines 10-16 does not show and/or describe that the base cell 245 lacks interconnect patterns and contacts. FIG. 3A of Solomon et al. merely provides a schematic drawing of base cells 245 (e.g., col. 5, lines 17-18). A physical layout of the base cell 245 is provided in FIG. 3B (col. 5, lines 44-45). As evidenced therein, in FIG. 3B, the base cell 245 has metal traces (310, 312, 320, 322, 330, 332) which are electrically coupled to the underlying portions with contacts in order to form terminals (col. 5, 11, 64-col. 6, 11, 14). Thus Solomon et al. shows the base cell 245 having interconnect patterns(metal traces) and contacts contrary to the claimed invention.

For anticipation under 35 U.S.C. § 102, the reference must teach every aspect of the claimed invention either explicitly or impliedly. Any feature not directly taught must be inherently present (M.P.E.P. 706.02). Since each and every element, as set forth in the claims are not found either expressly or inherently described as required by the M.P.E.P., Solomon

et al. cannot be said to anticipate the invention as claimed. Hence, withdrawal of the rejection is respectfully requested.

Each of the dependent claims depend from one of independent claims 1 or 10 and are patentable over the cited prior art for at least the same reasons as set forth above with respect to claims 1 and 10.

In addition, each of the dependent claims also recite combinations that are separately patentable.

In view of the foregoing remarks, this claimed invention, as amended, is not rendered obvious in view of the prior art references cited against this application. Applicant therefore request the entry of this response, the Examiner's reconsideration and reexamination of the application, and the timely allowance of the pending claims.

In discussing the specification, claims, and drawings in this response, it is to be understood that Applicant in no way intends to limit the scope of the claims to any exemplary embodiments described in the specification and/or shown in the drawings. Rather, Applicant is entitled to have the claims interpreted broadly, to the maximum extent permitted by statute, regulation, and applicable case law.

Should the Examiner believe that a telephone conference would expedite issuance of the application, the Examiner is respectfully invited to telephone the undersigned patent agent at (202) 585-8316.

Respectfully submitted,

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